AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

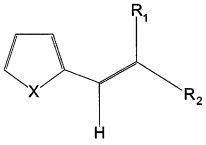
Claims 1-26: (canceled)

Claim 27 (currently amended): A controlled radical grafting process of a polyolefin, derived from monomeric units comprising α-olefins, comprising the reaction of the polyolefin and at least one radical reaction initiator with a grafting system which comprises at least one grafting compound having an electron donator heterocyclic aromatic ring conjugated to at least one $-HC=CR_1R_2$ group in which at least one of R_1 and R_2 is an electron acceptor functional group, wherein said grafting system further includes at least one unsaturated compound which has at least one group which ~~is able to react~~ reacts with an aminic and/or carboxylic and/or hydroxylic functionality and is chosen from acrylic and methacrylic compounds, maleic anhydride, derivatives ester of maleic anhydride, and their mixtures.

Claim 28 (previously presented): A process according to claim 27, in which R_1 and R_2 are chosen independently of one another from –H, -COOR, -COOH, -COR, -COH, -CN, $-CONH_2$, $-COO(CH_2)_nCF_3$ and $-COO(CH_2)_nCN$, where R is a linear or branched aliphatic or aromatic linear alkyl group and n is a whole number lying between 1 and 20, with the proviso that R_1 and R_2 are not both –H.

Claim 29 (currently amended): A process according to claim 27, in which the said heterocyclic ring is a ~~possibly~~ substituted furanic thiofenic, or pyrrolic ring.

Claim 30 (previously presented): A process according to claim 27, in which the said grafting system comprises a compound of formula:

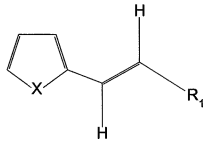


where X is chosen from O, S and N, and R_1 and R_2 are the same or different functional groups chosen from -COOR, -COOH, -COR, -COH, -CN, $-CONH_2$, $-COO(CH_2)_nCF_3$ and $-COO(CH_2)_nCN$ where R is an aliphatic or aromatic linear or branched alkyl group and n is a whole number lying between 1 and 20.

Claim 31 (previously presented): A process according to claim 30, in which the said groups R_1 and R_2 are the same of the type –COOR, where R is $-CH_2CH_3$.

Claim 32 (previously presented): A process according to claim 30, in which the said group R_1 is –CN and the group R_2 is –COOR, where R is $-CH_2CH_3$.

Claim 33 (previously presented): A process according to claim 27, in which the said grafting system comprises a compound of formula:



where X is chosen from O, S and N, and R_1 is a functional group chosen from -COOR, za-COOH, -COR, -COH, -CN, -$CONH_2$, -$COO(CH_2)_nCF_3$ and –$COO(CH_2)_nCN$ where R is a linear or branched aliphatic or aromatic linear alkyl group and n is a whole number lying between 1 and 20.

Claim 34 (previously presented): A process according to claim 33, in which the said group R_1 is –COOR, where R is $–CH_2CH_2CH_2CH_3$.

Claim 35 (previously presented): A process according to claim 27, in which the said polyolefin is chosen from the group consisting of homopolymers and copolymers of α-olefins and their mixtures.

Claim 36 (previously presented): A process according to claim 27, in which the said radical initiator has a half life lying between 10 and 200 seconds in the temperature range lying between 120 and 240°C.

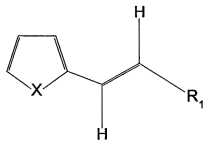
Claim 37 (previously presented): A process according to claim 27, in which the said radical initiator is an organic peroxide such as a dialkyl peroxide, a diacil peroxide, a peroxy ester or a peroxychetal.

Claim 38 (previously presented): A process according to claim 27 in which the said radical initiator is chosen from the group consisting of dicumil peroxide, ditertbutyl peroxypropylbenzene, 2,5 dimethyl 2,5 ditertbutyl peroxy-hexane, 3,6,9-triethyl-3,6,9 trimethyl-1,4,7 – triperoxynonan and their mixtures.

Claim 39 (previously presented): A process according to claim 27, in which 0.5 to 30% by weight of the said grafting system and from 0.05 to 5 parts by weight of the said radical initiator are mixed with 100 parts by weight of the said polyolefin.

Claim 40 (previously presented): A process according to claim 27, in which 100 parts by weight of the said polyolefin are mixed with 1 – 25 parts by weight of an unsaturated compound chosen from acrylic and methacrylic compounds, maleic anhydride, ester derivatives

of maleic anhydride and their mixtures, 0.05 – 5 parts by weight of a radical initiator of organic peroxide type and 0.1 – 5 parts by weight of a compound of formula



where X can be chosen from O, S and N, and R_1 is a functional group chosen from COOR, -COOH, -COR, -COH, -CN, -$CONH_2$, -$COO(CH_2)_nCF_3$ and –$COO(CH_2)_nCN$, where R is a linear or branched aliphatic or aromatic alkyl group and n is a whole number lying between 1 and 20.

Claim 41 (previously presented): A process according to claim 39, in which 100 parts by weight of the said polyolefin are further mixed with 0.01-1 parts by weight of a radical reaction inhibitor.

Claim 42 (previously presented): A process according to claim 41, in which the said radical reaction inhibitor is chosen from the group consisting of 3,5-di-tert-butyl-4 hydroxytoluene, pentaerythrityl-tetrakig[3-(3,5-di-i-butl-4-hydroxlphenyl)-propionate] and actodecyl 3, 5-di-(tert)-butly-4 hydroxhyrocinnamot.

Claim 43 (previously presented): A process according to claim 27, performed in a mixer provided with a rotor.

Claim 44 (previously presented): A process according to claim 43, in which the said grafting system is introduced into the mixer after the polyolefin.

Claim 45 (previously presented): A process according to claim 44, in which the said grafting system is introduced into the mixer once the torque transmitted by the rotor member is stabilized.

Claim 46 (previously presented): A process according to claim 43, in which the said radical initiator is introduced subsequently to the grafting system.

Claim 47 (previously presented): A process according to claim 43, in which the rotor member turns with an angular velocity of 20 – 70 rpm.

Claim 48 (previously presented): A process according to any of claim 43, in which the residence time of the reagents in the mixer lies between 5 and 30 minutes.

Claim 49 (previously presented): A process according to claim 43, in which the temperature of the reagents lies between 120 and 230°C.

Claim 50 (previously presented): A process according to claim 43, performed continuously by means of a twin screw extruder.

Claim 51 (new): A process according to claim 27, in which the said heterocyclic ring is a possibly substituted furanic thiofenic, or pyrrolic ring which is unsubstituted or substituted, respectively.